UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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BOSTON, MASSACHUSETTS 02114-2023

August 24, 2001

David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, D.C. 20426

RE: Hubline/Maritimes Phase III Gas Pipeline Project, Docket Nos. CP01-4-000, CP01-5-000 and CP01-8-000 (EPA ERP # FRC-B03012-00)

Dear Mr. Boergers:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), Section 404 of the Clean Water Act and Section 309 of the Clean Air Act we have reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Maritimes Phase III and Hubline natural gas pipeline facilities proposed by Maritimes & Northeast Pipeline, L.L.C. (Maritimes) and the Algonquin Gas Transmission Company (Algonquin).[1]

According to the DEIS, the Maritimes proposal entails the construction and operation of 24.8 miles of natural gas pipeline from Methuen, Massachusetts to Beverly, Massachusetts where the line would join the proposed Algonquin Hubline project. From the connection point in Beverly the Hubline would extend 29.4 miles across Massachusetts Bay to the existing Algonquin system in Weymouth, Massachusetts. The Hubline work would also include construction of a lateral pipeline extending in Boston Harbor to Deer Island to service existing industrial facilities. Maritimes and Algonquin present the project as a means to improve the ability to deliver natural gas in a reliable manner in the Northeast and to improve the availability of natural gas from the Sable Island portion of Nova Scotia.

Construction of the two pipeline facilities will result in two sets of impacts associated primarily with the distinct settings where the construction is proposed. As the Maritimes Phase III project runs overland, it will affect a total of 290 acres of land through construction in the pipeline right-of-way and the establishment of extra temporary work space necessary for crossing roads, railroads, wetlands and waterways, and for topsoil and pipe storage and contractor yards. A total of 112 wetlands and 26 perennial waterbodies will be crossed which will result in temporary disturbance to 67.7 acres of wetland during construction and permanent conversion of 12.6 acres of those wetland areas from

[1] EPA New England (EPA) plans to submit additional formal Clean Water Act Section 404 comments in response to the Corps of Engineers' public notice when it is issued.

forested wetlands to shrub/scrub swamp. According to the DEIS, construction of the Hubline would disturb up to a total of 7,800 acres of subtidal bottom through trench excavation (110 acres), sidecasting of trench spoil and associated sedimentation (410 acres), pipeline armoring (4 acres) and construction barge anchor cable sweep during placement of the pipeline (7,300 acres).

EPA New England (EPA) has commented to FERC over the past several years on a number of natural gas pipeline projects in northern New England. These include a shared pipeline proposed by Maritimes and the Portland Natural Gas Transmission System (PNGTS) from Dracut, Massachusetts to Wells, Maine and an extension of the shared line from Wells to Westbrook, Maine and 347.0 miles of pipeline between Woodland and Westbrook, Maine. In addition to our review of those projects, EPA provided comments on the Maritimes Phase III/Algonquin Hubline project in response to a FERC scoping notice. Our scoping comments specifically requested FERC to address the potentially wide range of significant direct and indirect impacts to resources within EPA's areas of jurisdiction and expertise. Based on our review of the available information at that time we expressed our concerns about impacts to wetlands, drinking water supplies, groundwater, and ocean resources. We also encouraged FERC to establish a broad scope of analysis that would consider an expanded range of alternative routes (on land and by sea) and that could fully describe the applicability of various construction techniques to avoid impacts. We also expressed our opinion that the EIS should be prepared so that it could meet the provisions of both the National Environmental Policy Act and the Massachusetts Environmental Policy Act (MEPA).

During our review of the DEIS, we received a copy of the Draft Environmental Impact Report (DEIR) prepared by the applicant pursuant to MEPA. The DEIR supplements the DEIS and incorporates it by reference. We used both documents to help frame our comments about the analysis and acceptability of the impacts of the project and in many instances found that the DEIS contained less specific information than its MEPA counterpart. This situation is far from ideal and represents a missed opportunity to combine the relevant state and federal review processes. The comments below and in the attachment to this letter address this shortcoming and a number of other concerns with regard to the analysis of impacts for this project. We believe additional information with regard to impacts to the marine environment and to drinking water supplies as well as mitigation must be provided in order to fully evaluate the environmental acceptability of the proposed project.

Maritimes Phase III Comments:

- **For the most part, the 24.8 mile Maritimes alignment is designed to avoid sensitive resources.** EPA commends the applicant's efforts to reduce construction and operational impacts by paralleling existing New England Power Company (NEPCo) and Tennessee Gas Pipeline Company (TGP) right-of-way areas where possible. According to the DEIR, approximately 70 percent of the entire route is sited parallel/adjacent or within existing utility corridors as well as rail and road right-of-way areas.
- **The DEIS lacks adequate information to fully evaluate the potential water supply impacts of construction and operation of the pipeline.** Specifically, the relationship

between the proposed pipeline construction route and existing private wells and community water supply systems is poorly described in the DEIS and DEIR. Without this information, it is not possible to determine if the mitigation proposed will adequately protect water supplies along the proposed Maritimes route.

- **The Maritimes project should not cause unacceptable harm to wetland ecosystems along the proposed route if mitigation measures described in the DEIR are implemented.** EPA supports the wetland mitigation measures offered in the DEIR for the project and recommends that FERC adopt these measures in the FEIS. In instances where sensitive resources are identified that cannot be avoided, the use of horizontal directional drilling (HDD) should be seriously considered as an appropriate construction technique to minimize impacts.

Hubline Comments:

- **The DEIS and DEIR are marked by a significant lack of information about the toxicity of marine sediments along the proposed pipeline route.** In particular, little information is provided about a historic disposal site between pipeline mile point (MP) 7.0 and 9.5. Based on available information, it is impossible to evaluate the potential impact of construction in these sediments and whether effective mitigation is possible. For this reason, EPA supports the FERC request for a review of the impacts of alternate alignments for this section of the pipeline. Moreover, it is clear that a complete chemical characterization and toxicity assessment of the sediments in this area should be conducted and the results presented for review in the FEIS and FEIR.

- **The proposed construction of the Hubline pipeline will impact a variety of marine subtidal habitats.** Based on our review, Algonquin took a reasonable approach aligning the pipeline in the shallow near-shore environment to minimize direct construction impacts. Despite this approach, substantial impacts will occur to marine subtidal habitats, including soft bottom, submerged aquatic vegetation, lobster habitat and scallop beds. In some cases, information about the extent of these resources is limited in the DEIS and DEIR. Moreover, additional mitigation measures must be developed to reduce the extent and nature of impacts associated with construction of the pipeline.

- **Mitigation measures are an essential component of the Hubline project.** The majority of the marine impacts are likely temporary and associated with short term disturbance of the bottom due to construction. However, additional consideration of alternate alignments is warranted given that the strong potential exists for some toxicity in the water column due to the disturbance of contaminated sediments along the route. If this analysis reveals that contaminated areas cannot be avoided, strict adherence to dredge windows in combination with a water quality monitoring program will be critical elements for the project to proceed in an environmentally sound fashion. Finally, EPA is concerned with the sheer magnitude of the

marine impacts. After the impacts are fully documented, EPA urges FERC and Algonquin to open an inclusive dialogue with the relevant state and federal regulatory agencies on the issue of compensatory mitigation as soon as possible, and prior to the publication of the FEIS/FEIR documents, so a well informed permitting process can proceed efficiently. EPA looks forward to participating in those discussions.

- **Effective communication and coordination during construction will be critical to the minimization of environmental effects.** The project schedule in the DEIS calls for the Hubline to be in service by November 1, 2002. This schedule is challenging given the number of unresolved issues, the late fall and early winter construction window, and the level of coordination that will be required with numerous maritime interests potentially effected by the project. Moreover, an overly ambitious construction schedule may result in the violation of conditions contained in the certificate and other permits issued for the project and unnecessary environmental degradation could occur. Regardless of the final routing selected, construction is likely to disturb contaminated sediments, shellfish beds, eelgrass habitat, established fishing grounds and may create obstacles to commercial navigation and anchoring in Massachusetts Bay. These types of conflict during construction will only serve to delay the project and increase impacts to the environment. In order to reduce the chance of avoidable conflicts, the FEIS should fully explain the communication and coordination mechanisms that will be in place prior to construction. For example, we understand that ongoing coordination between the applicant and the Massachusetts Water Resources Authority (MWRA) regarding outfall monitoring in Massachusetts Bay has been productive and ask that a similar level of coordination be afforded to other concerned parties.

Conclusion/Rating

Considered together, the DEIS and DEIR provide a good basis for preliminary discussion about the proposed project. Unfortunately, the DEIS was issued prematurely and lacks sufficient information to: fully describe the environmental impacts of the project; to determine whether alternative alignments are possible to reduce impacts; and whether the mitigation is appropriate given an as yet undetermined level of environmental impact. Throughout the document, FERC recommends that additional information should be submitted to address these issues to FERC's Office of Energy Projects (OEP) for examination during the review of the DEIS.[2] FERC may have been better advised to delay issuance of the DEIS pending a complete presentation of the environmental impacts. The issuance of an incomplete DEIS does not allow for an informed agency and public review of relevant project information prior to

[2] For example, the DEIS recommends that Maritimes and Algonquin provide information to the FERC OEP office relating to plans for the Hubline crossing of a historic disposal/dump site; possible extension of HDDs seaward to reduce the extent of shallow water dredging; and the development of an anchorage plan for all of its marine construction operations to minimize the area of direct impact by anchors and cable sweep.

FERC decision-making. To correct this deficiency and to increase the ability of the NEPA process to support informed decision-making, we suggest that FERC make this supplemental information/analysis available for public review and comment prior to the preparation of the FEIS.

Finally, EPA notes that the construction of the Maritimes and Hubline projects holds the promise of improved air quality for the region through reductions in pollutants generated to produce electricity. In particular, the proposed project has the potential to provide reliable gas supplies to new, existing and repowered power plants in the Boston Metropolitan area. For example, this new gas supply could help the Salem Harbor power plant in Salem, Massachusetts[3], to reduce air emissions in the region. EPA has encouraged Salem Harbor to seriously consider this new fuel source in its future planning for the facility.

For the reasons discussed above, EPA has rated this EIS "EC-2-Environmental Concerns-Insufficient Information" in accordance with EPA's national rating system, a description of which is attached to this letter. We look forward to reviewing responses to the issues and concerns highlighted in this letter and technical attachment and to continued work with you and other federal, state and local agencies with a strong interest in a comprehensive environmental review of this project. Please feel free to contact me or Timothy Timmermann of the Office of Environmental Review at 617/918-1025 if you wish to discuss these comments further.

Sincerely,

Robert W. Varney
Regional Administrator

Attachment
cc:

Bob Durand, Secretary, Executive Office of Environmental Affairs
Jay Wickersham, Executive Office of Environmental Affairs, MEPA Unit
Thomas Skinner, Director, Massachusetts Office of Coastal Zone Management
Gus McLachlan, Maritimes and Northeast Pipeline
Marianne Connolly, Massachusetts Water Resource Authority
Lauren Liss, Commissioner, Massachusetts Department of Environmental Protection

[3] Salem Harbor is one of the six highest-emitting power plants, regulated under proposed June 2000 Massachusetts Department of Environmental Protection regulations to reduce air emissions.

Technical Attachment to EPA Comment Letter on Phase III/Hubline Project
Draft Environmental Impact Statement

Water Supply/Water Resources

The DEIS and DEIR do not provide enough information to evaluate the project's potential to impact public and private water supplies (both ground and surface water sources) or whether the proposed mitigation measures will be effective and appropriate. According to the DEIS, the proposed pipeline will cross through surface drinking water protection areas for 5 public surface drinking water sources, and the watershed of two treated public surface water supplies (Ipswich River and Merrimack River), and at least one wellhead protection area. The pipeline will also be in close proximity (within 200') to several private wells.

Affected Resources

In our scoping comments for the project, we recommended that the EIS provide information to show the relationship of the project to any existing or potential sources of drinking water. If portions of the pipeline would cross over any existing or potential future water supply protection areas (for both wellhead and surface water sources), we requested that the EIS provide a map illustrating the location of the pipeline within the water supply protection area and the source location. Instead, the DEIS and DEIR documents provide a narrative discussion of affected water supplies making it difficult to assess the potential impact of the pipeline. For example, according to Table 3.3.2-5 of the DEIS, the proposed pipeline will cross several water supply basins and protected areas including the Zone A surface water protection area for three drinking water sources: Chadwick Pond, Emerson Brook Reservoir and Middleton Pond. Zone A protection areas include the lands most critical for protection of surface drinking water supplies. These areas should be avoided whenever possible. Portions of the proposed pipeline would pass through the Zone A area of several public drinking water sources but there is no justification provided for the proposed routing provided in the DEIS. More information should be provided to explain whether alternative routes exist to avoid construction impacts in these areas.

In addition, the DEIS on page 3-15 indicates that the proposed Maritimes pipeline crosses 1,300 feet from the Candlelight Motor Inn well in Middleton, but it doesn't indicate if it's in the wellhead protection area for the Inn's well. The lack of a map illustrating the location of the pipeline, water supply source and its protection area prevent the reader from identifying whether that portion of the pipeline is within the wellhead protection area of the Candlelight Inn well. According to the DEIS (page 3-16), the Phase III Pipeline would also cross through a Zone II associated with the Ipswich River. Zone II's are wellhead protection areas and are delineated to protect ground water sources of public water supplies. The FEIS should clarify the location of the well associated with this Zone II and its distance from the proposed pipeline.

Consistency with Water Supply/Land Use Regulations

EPA's scoping comments requested that the EIS describe the compatibility of the proposed activities with any existing and proposed local land use restrictions and state regulations adopted for the protection of drinking water sources. This information has not been included in the DEIS. The FEIS should correct this deficiency.

Construction Methods

A variety of methods are proposed to cross public water supplies with downstream intakes within 3 miles of the construction. EPA agrees with the proposed use of HDD to cross the Emerson Brook Reservoir. The other crossing methods appear reasonable, with the possible exception of the crossing of an un-named tributary to the Emerson Brook Reservoir. According the DEIS, that crossing would be only 400' upstream of the Emerson Brook intake. However, its location is unclear from the maps provided in the DEIS, making it difficult to evaluate potential for impacts to the drinking water source.

Notification

EPA is also pleased to see that FERC recommends that Maritimes notify the jurisdictional water resource authorities for any public drinking water intakes within 3 miles downstream of any water body crossing at least 48 hours prior to the start of in-stream work. The FEIS should clarify who would be notified. EPA recommends that at a minimum, the Water Supply Superintendent of each potentially affected public water supply and local Board of Health be notified.

Blasting

Blasting associated with pipeline construction may potentially affect nearby drinking water sources. According to the DEIS, Maritimes intends to monitor construction impacts through pre-and post-construction monitoring of private wells located within 150' of pipeline activities, with the well-owner's permission. Also, in areas where blasting will be necessary, the proponent will carry out pre- and post-blasting well sampling within 200' of construction blasting. The area potentially affected by blasting and construction activities will vary depending on localized site conditions and the blasting technique used. It isn't clear from the DEIS how the suggested sampling distances were determined. While the DEIS explains the Maritimes offer to sample wells, it does not specify the scope of the sampling effort. We suggest that the water quality testing should seek to detect a range of drinking water contaminants, including volatile organic compounds. The FEIS should explain whether follow-up sampling would occur over some time period to provide detection of contaminants which may be migrating toward nearby wells due to pipeline construction and operations. The discussion should also explain how the monitoring plan would change, to conceivably include more well owners beyond the sampling area, should impacts be detected at wells within the sampling area.

While the DEIS indicates that blasting may be necessary in some instances, it does not describe the blasting materials which will be used and their potential to cause contamination. The use of ANFO (ammonium nitrate and fuel oil) has led to ground water contamination in other instances and it therefore should not be used in any drinking water protection areas or areas relying on private wells for drinking

water supply. According to the DEIS, there are seven sites along the Maritimes pipeline with existing or potential soil and/or ground water contamination. The FEIS should evaluate whether blasting or other construction activities near these sites may change ground water flow paths and potentially affect nearby water quality in ground and surface waters used as a drinking water source.

Finally, to protect against damage to wells from blasting when blasting will occur in the vicinity of private and publicly-owned wells, a peak particle velocity measured at any point in existing wells should be established to prevent vibration induced damage to bedrock and well structures.

Spill Control and Prevention

EPA's scoping comments requested that the EIS describe how oil, gas and other accidental hazardous spills resulting from refueling/maintaining/storing/operating construction equipment will be managed as part of the project. The DEIS provides some information related to this request through its summary and submission of a Spill Prevention, Control and Countermeasure (SPCC) Plan. However, the current SPCC plan allows handling of hazardous materials in many instances in close proximity (within 200') to drinking water wells and potable surface water supplies. According to the DEIS (Page 3-17), Maritimes indicates that the SPCC plan prohibits refueling activities and storage of hazardous materials within a 400' radius of all municipal or community water supply wells. However, similar language was not found in the SPCC plan provided in Appendix F of the DEIR. EPA agrees with the FERC recommendation that the SPCC plan be revised to prohibit all refueling activities within 200' of private wells and supports a similar prohibition within the Zone I area of all water supply wells. To protect against impacts from spills to surface drinking water supplies, EPA recommends that storage of hazardous materials be prohibited within the Zone A area of surface drinking water supplies (400 feet from the bank of a Class A surface water source and 200 feet from the bank of a tributary or associated water body). Massachusetts Drinking Water Regulations (310 CMR 22.20B) generally prohibit aboveground storage of liquid hazardous material or liquid propane or liquid petroleum products in Zone A's. In Appendix F of the DEIR, Attachment B to the SPCC plan provides space for listing of emergency response personnel. Water Supply Superintendents should be notified immediately in the event of any spill located in a drinking water protection area.

Maritimes has requested a variance from standard FERC waterbody crossing procedures to allow spoil to be sidecast in the water body channel for at least four intermediate waterbodies, including two waters associated with drinking water supplies (Ipswich River and the Ipswich River Intake Channel). The FEIS should provide information to explain whether this action will result in impacts to downstream surface drinking water source quality.

Hydrostatic Testing

Maritimes will carry out hydrostatic testing to ensure pipeline integrity. After the test, water will be discharged either to the next test section, back into the source waterbody, or into an upland area. Potential impacts resulting from the discharge of hydrostatic test water into streams includes the erosion of soils and subsequent degradation of water quality from increased turbidity and sedimentation. According to the DEIS, Maritimes is investigating potential locations for these activities. As part of these efforts the Emerson Brook Reservoir drinking water source is described as a potential hydrostatic test water source. If this water supply source is used for hydrostatic test purposes negative water quality impacts should be avoided.

Marine Habitat Impacts

The proposed Algonquin Hubline will traverse a variety of marine subtidal habitats. Based on the information presented in the DEIS, and in particular the DEIR, Algonquin appears to have made a reasonable effort to align the pipeline to minimize direct construction impacts in the shallow near shore environment. Despite these efforts, substantial impacts will occur to marine subtidal habitats. The large majority of the impacts will be temporary disturbance to soft bottom habitat, but impacts will also extend to submerged aquatic vegetation, lobster habitat and scallop beds.

Submerged aquatic vegetation

As currently designed the Hubline will pass within several hundred feet of the delineated edge of eelgrass in Salem Sound and will directly eliminate some macroalgal beds. The extent of eelgrass resources mapped on the project plans submitted with the DEIR are based on the Massachusetts GIS system. Even though the Massachusetts GIS database is an excellent initial source of information, it must be supplemented with site specific data, especially for resources like eelgrass which can be a somewhat transient resource during the course of a growing season and on an annual basis. Verification of the actual extent of eelgrass beds along this portion of the Hubline is warranted given that water depths in the area of MP 1.5, the portion of the pipeline nearest the eelgrass, are between 11 and 15 feet mean low water. These depths are well within the normal depth range of eelgrass. In fact, it is likely that eelgrass is already growing in that area, but may be below a density that can be detected by the aerial photograph technique utilized for the GIS maps. Algonquin should prepare and submit a detailed submerged aquatic vegetation map, based on field observations, for the pipeline between MP 1 and MP 2, that can be used to demonstrate how impacts to eelgrass resources will be avoided during pipeline construction.

In addition to eelgrass, kelp and macroalgae are important habitat formers that are also considered submerged aquatic vegetation. EPA is concerned about the potential impacts to these habitats, especially along the pipeline route between MP 4 and 7.5 and MP 19 and 23. It is likely that these impacts will be temporary in nature if the final substrate in the construction area matches what was there initially. FERC should require post construction substrate consistency to prevent anything other than temporary impacts to these resources.

Lobsters

Construction of the Hubline will result in the disturbance of lobsters and their habitat along the route. To minimize the effect of construction impacts it is critical that the project avoids the loss or displacement of areas with a gravel and cobble bottom where early benthic phase lobsters thrive. This is especially true of gravel and cobble areas that could become habitat bottlenecks for settling of early benthic phase lobsters. In order to avoid the long-term loss of lobster habitat, Algonquin should be required to restore bottom conditions in areas where cobble and gravel substrate are impacted to match pre-construction conditions as closely as possible.

Scallop beds

Scallop beds, like eelgrass meadows, are not a static resource. The Hubline pipeline between MP 4 and 6 will pass very closely to delineated scallop beds. Those delineations should serve as a general guide and not an absolute marker. To prevent avoidable impacts to scallop beds Algonquin should prepare and submit a detailed scallop map, based on field observations, for the pipeline between MP 4 and 6 that can be used to demonstrate how impacts to this resource will be avoided during pipeline construction.

Contaminated sediments

There are several locations where the proposed Hubline pipeline will pass through contaminated marine sediments. Along some portions of the alignment, such as in Salem Harbor, it may be difficult to avoid these areas. As suggested by FERC, alternate construction techniques through these areas, including directional drilling, should be explored. Along another portion of the proposed Hubline from MP 7 to 9, a historic disposal site is known to exist. Based on available information, it is impossible to evaluate the potential impact of construction in these sediments and whether effective mitigation is possible. For this reason, EPA supports the FERC request for a review of the impacts of alternate alignments for this section of the pipeline. Moreover, it is clear that a complete chemical characterization and toxicity assessment of the sediments in this area should be conducted and the results presented for review in the FEIS and FEIR. It is our understanding that work along these lines may already be underway. EPA, however, has not reviewed or been involved in the development of the sampling plan for this sediment characterization effort and we reserve the right to question the efficacy of this plan and the subsequent results. If construction through contaminated sediments is deemed necessary and environmentally acceptable, EPA expects that a monitoring plan, similar to the one devised for the Boston Harbor Navigation Improvement Project, would be developed during the permitting of this project.

Mitigation

According to the DEIS/DEIR, the majority of the marine impacts associated with the Hubline project are likely to be temporary in nature and associated with short term disturbance to the bottom due to construction of the pipeline. In our opinion, disturbances should only be classified as temporary if dramatic substrate shifts do not occur as a result of construction. As noted above, the potential exists for some toxicity in the water column due to the disturbance of contaminated sediments. Impacts from this disturbance can be significantly reduced through efforts to reroute the pipeline around contaminated sediments. If the route or construction techniques cannot be modified to avoid toxic sediments, a

monitoring program should be developed (in conjunction with relevant regulatory agencies) with strict adherence to triggers or thresholds that would slow or temporarily stop construction to minimize impacts (like the one used for the Boston Harbor Navigation Improvement Project). In addition, dredge windows in place for the pipeline construction work, must be strictly adhered to in areas where contaminated sediments may exist to avoid exposing what are, in many cases, the most sensitive life stages of various organisms to toxicity in the water column.

The sheer distance of the pipeline through near shore areas and Massachusetts Bay and the transient nature of numerous marine resources along the route suggests that it is very likely that sensitive and legally protected resources will be impacted during construction. Though the level of impacts do not rise to the level that we must object to the project, we believe compensatory mitigation is warranted. Therefore, we reiterate our recommendation above that detailed resource maps for the areas between MP 1-2, MP 4-7.5 and MP 19-23 should be developed and used to finalize pipeline routing and to create effective mitigation plans. Moreover, EPA strongly urges Algonquin to open an inclusive dialogue with the relevant state and federal regulatory agencies, including the EPA, on the issue of compensatory mitigation in advance of the conclusion of the NEPA and MEPA reviews. It is in the project proponent's best interest to initiate these discussions as soon as possible, so the permitting process can proceed efficiently.

One mitigation measure we believe would help to compensate for construction impacts to the bottom involves offsetting those impacts by eliminating or reducing similar impacts from other activities. For example, in the near shore marine environment, boats are often moored with excess chain attached to the mooring block. This chain is then dragged along the bottom through the course of each tide cycle, leaving over time a circular scour mark on the bottom. The size of the scour area is typically proportional to the size of the vessel and the size of the chain used. This constant scouring denudes the bottom of vegetation and typically results in a benthic community dominated by disturbance tolerant species. This does not have to be the case, however, as a number of new mooring designs exist that would eliminate or reduce the scope of this effect. This new mooring gear tends to be slightly more expensive than traditional block moorings and consequently it has been difficult to get people to make the switch on their own. Because Algonquin will need to remove some moorings to construct the pipeline, it makes sense to replace them in turn with environmentally friendly moorings as a way to help offset some of the impacts associated with construction.

Wetland and Aquatic Resource Impacts

Maritimes Phase III Facilities

According to the DEIR, approximately 70 percent of the entire route is sited parallel/adjacent or within existing utility corridors as well as rail and road right-of-way areas. EPA staff spent three days touring portions of the proposed pipeline corridor with Maritimes representatives and staff from the Massachusetts Department of Environmental Protection (MA DEP). Based in part on that field work, and subsequent requests made by the MA DEP, Maritimes is currently evaluating minor route adjustments and reductions in construction workspace to minimize environmental impacts. EPA would

like to commend both Maritimes and the Massachusetts DEP staff for their efforts to reduce wetland environmental impacts early in the route planning stage of this project. With that in mind we offer the following specific comments about the routing of the Maritimes Phase III and Hubline pipeline:

- EPA supports the FERC request for a site-specific mitigation plan for construction adjacent to the great blue heron rookery between MP 1 and 4. This plan will be critical to minimize nesting season impacts associated with construction of the pipeline. The goal of construction in this area should be to avoid all impacts to the rookery.

- Work near a water supply channel associated with the Ipswich River at MP 17.4 will require appropriate construction techniques to protect the water supply during the proposed open-cut dam and pump construction within this channel. (See also our comments about this area in the Water Supply/Water Resources Section above).

- Impacts to the wetlands and salt marsh associated with the Waters River in Danvers near MP 22.0 should be avoided by routing the pipeline on the upland side of the Tennessee Gas Pipeline right-of-way along the Osram Sylvania plant.

- EPA supports the use of HDD construction techniques to minimize environmental impacts such as wetland and/or stream disturbance, disturbance of potentially contaminated sediments, and avoidance of endangered species especially at: the Waters River (MP 22.6), the Emerson Brook Reservoir, the Merrimack River, and offshore into Beverly Harbor (MP 24.24). In the case of the Beverly Harbor location the use of HDD also avoids or minimizes impacts to intertidal or shallow water habitat and eelgrass habitat that would otherwise occur with conventional pipeline construction techniques. EPA would like to review the Directional Drill Contingency plan for each proposed location along the route. At a minimum, the key elements of these contingency plans should be described in the FEIS.

<u>Hubline Facilities</u>

The DEIS indicates that after the pipeline is installed on the sea floor it will be left to fill in over time through natural erosion and sedimentation. The DEIR, on the other hand, explains that this will not be the case and "except in limited areas (at utility crossings)....the pipeline will be layed on the surface and armored." This discrepancy is not a minor one and it should be addressed in the FEIS. Nevertheless, EPA supports efforts to bury the pipeline in a manner that reestablishes preconstruction substrate conditions along the pipeline corridor. (See comments above in the Marine Habitat Impacts Mitigation discussion.) If this is not possible, the FEIS and FEIR should discuss if mitigation is possible for the likely long term loss of productivity of the marine bottom habitat areas affected by the project.